

**U.S.S.N 10/085,340
MELLOR et al.
PRELIMINARY AMENDMENT**

IN THE CLAIMS:

Please replace claims 8 and 17 with the following amended claims (a marked up copy of the amended claims is attached to this Amendment):

A-8
8. (Amended)A method of transmitting a communication signal between a radio base station and a radiation element, the method comprising:
receiving an input signal;
extracting a data signal from the input signal that includes values representing operating parameter settings for devices at the radiation element; and
producing an output signal for each device that transfers the operating parameter setting to the device.

A-9
17. (Amended)An apparatus for transmitting a communication signal between a radio base station and a radiation element, the apparatus comprising:
a bias tee configured to receive an input signal; and
a controller configured to extract a data signal from the input signal that includes values representing operating parameter settings for devices at the radiation element and to produce an output signal for each device that transfers the operating parameter setting to the device.

REMARKS

Any fees that may be due in connection with this application throughout its pendency may be charged to Deposit Account No. 50-1213.

Claims 8 and 17 are amended to correct obvious grammatical errors. The specification is amended to correct obvious spelling, typographical and grammatical errors. The amendment the paragraph on page 12, lines 6-11, replaces the number "900" with the number —1800— and replaces the number "1800" with the number —900—. The amendment finds basis in Figure 5. The amendment to the paragraph on page 14, lines 8-16, replaces the number "369" with the number —368—. The amendment finds basis on page 12, line 23, and in Figure 5. The amendment to the paragraph on page 17, lines 8-18, replaces the number "500" with the number

U.S.S.N 10/085,340
MELLOR *et al.*
PRELIMINARY AMENDMENT

—550—. The amendment finds basis on page 17, line 8, and in Figure 5. No new matter has been added to the claims or the specification.

In view of the amendments and above remarks, entry of the amendments and examination of the application on the merits are respectfully requested.

Respectfully submitted,
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: MELLOR *et al.*
Serial No.: 10/085,340
Conf. No.: 8537
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IN AN ANTENNA LINE
MANAGEMENT SYSTEM*
Art Unit: 2681
Examiner: Unassigned

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ATTACHMENT TO THE PRELIMINARY AMENDMENT
MARKED UP PARAGRAPHS AND CLAIMS (37 CFR §1.121)

RECEIVED

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IN THE SPECIFICATION:

Please amend the specification as follows:

Technology Center 2600

Please replace the paragraph beginning on page 3, line 20, through page 4, line 7, with the following:

There are several drawbacks to the current monitoring technique for fault detection described above. One of the drawbacks is that only a single device at the radiation element may be attached to the feeder cable 130. If more than one device were connected to the feeder 130 it would not be possible to isolate which device is operating outside its normal operating parameters as indicated by a change in current draw. For example, if there were two MHA devices connected to a single feeder and both drew 100mA during normal operation, the total current drawn from the radio base station power supply during normal operation would be 200mA. If one of the MHA had a fault and changed its current draw to 150mA, the total current drawn from the radio base station power supply would be 250mA. Thus, it could be determined that one of the [MHA]MHAs had a fault, but it would not be possible to know which MHA had a fault.

Please replace the paragraph on page 5, lines 8-12, with the following:

U.S.S.N 10/085,340
MELLOR et al.
PRELIMINARY AMENDMENT ATTACHMENT

In another embodiment, a method of transmitting a communication signal between a radio base station and a radiation element includes receiving an input signal, then extracting a data signal from the input signal that includes values representing operating [parameters setting]parameter settings for devices at the radiation element, and producing an output signal for each device that transfers the operating parameter setting to the device.

Please replace the paragraph on page 6, lines 1-6, with the following:

In another embodiment, an apparatus for transmitting a communication signal between a radio base station and a radiation element includes a bias tee configured to receive an input signal, and a controller configured to extract a data signal from the input signal that includes values representing operating [parameters setting]parameter settings for devices at the radiation element and to produce an output signal for each device that transfers the operating parameter setting to the device.

Please replace the paragraph on page 11, lines 7-10, with the following:

The tower intelligent multiplexer receives the combined signal. The data [signal]signal, including the values representing operating [parameters]parameter settings for devices at the radiation [element]element, is extracted from the received signal. An output signal is produced that transfers the operating parameter settings to the device.

Please replace the paragraph on page 12, lines 6-11, with the following:

Figure 5 is a block diagram of one embodiment of intelligent multiplexers in accordance with the invention. The base unit intelligent multiplexer 360 receives communication channel signals from a plurality of communication channels. For example, in Figure 4 the base unit intelligent multiplexer 360 receives three (3) communication channel signals combined with their corresponding monitoring signals: A a UMTS signal; B a GSM [900]1800 signal; and C a GSM [1800]900 signal.

Please replace the paragraphs on page 14, lines 1-16, with the following:

The equipment monitoring unit 458 monitors the operational state of devices

U.S.S.N 10/085,340
MELLOR *et al.*
PRELIMINARY AMENDMENT ATTACHMENT

at the radiation element. For example, the equipment monitoring unit 458 may monitor the current drawn from a power supply 466 and used to power a device at the radiation element, such [as,]as a MHA. The equipment monitoring unit 458 communicates a signal to the controller 456 indicating the value of the monitored signal for each device that is being monitored. The controller 456 formats the values and passes them to the modem 450 for transmission to the base unit intelligent multiplexer 360.

In the base unit intelligent multiplexer 360, the communication channel signals are combined and their corresponding monitor signals are routed to the load simulator 410. The controller 414 receives a transmission from tower intelligent multiplexer [369]368 and extracts the data signal from the input signal received from the tower intelligent multiplexer 368 that contains values indicating operating parameter settings for devices at the radiation element. The controller 414, in response to the values received, produces a status signal for each device and communicates this status signal to the load simulator 410. The load simulator, using the status signal, simulates a feedback signal for each device.

Please replace the paragraph on page 17, lines 8-18, with the following:

Figure 5 also shows a universal antenna control interface 550. The universal antenna control interface 550 is in communication with the tower controller 456. The universal antenna control interface 550 is also in communication with equipment located at one or more radiation elements. The universal antenna control interface [500]550 may receive commands and control signals from the controller 456 and modify operating parameters, as well as monitor parameters, of equipment at a radiation element. For example, the universal antenna control interface may control and monitor the position of antenna tilt equipment, monitoring the voltage standing wave ratio (VSWR), and temperature of various pieces of equipment. Use of intelligent multiplexers supports the control and monitoring of equipment located at a radiation element over the same single feed cable that communication signals are transmitted.

U.S.S.N 10/085,340
MELLOR *et al.*
PRELIMINARY AMENDMENT ATTACHMENT

IN THE CLAIMS:

Please amend claims 8 and 17 as follows:

8. (Amended)A method of transmitting a communication signal between a radio base station and a radiation element, the method comprising:

receiving an input signal;

extracting a data signal from the input signal that includes values representing operating [parameters setting]parameter settings for devices at the radiation element; and

producing an output signal for each device that transfers the operating parameter setting to the device.

17. (Amended)An apparatus for transmitting a communication signal between a radio base station and a radiation element, the apparatus comprising:

a bias tee configured to receive an input signal; and

a controller configured to extract a data signal from the input signal that includes values representing operating [parameters setting]parameter settings for devices at the radiation element and to produce an output signal for each device that transfers the operating parameter setting to the device.